



## BEST MANAGEMENT PRACTICES

YOU DEPEND ON WOOD AND PAPER PRODUCTS  
SO . . . TREES MUST BE HARVESTED. TODAY'S  
LOGGERS CAN TAKE CARE OF THE LAND BY  
USING THESE METHODS.

**PLAN THE JOB.** Before any roads are built they should be laid out on a topographic map. Then the roadbuilder should walk and mark the proposed road paths to ensure that the roads can actually go where they are planned. No unnecessary roads should be built.

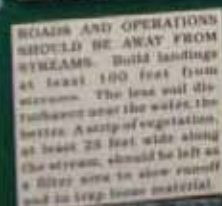
The steepness of the roads should be kept to a minimum. Less than 10% slope for haul roads and less than 15% slope for skid roads.



**STREAM-CROSSING SHOULD BE DONE VERY CAREFULLY.** A bridge or culvert should be used. The approaching roads should be at right angles to the stream and should not drain water directly towards the stream. The photo above shows unnecessary stream disturbance.



**WATER SHOULD BE DRAINED OFF ROADS AND LANDINGS.** The loggers should use ditches, culverts, dips, and grade breaks and should log in favorable weather when possible. During logging operations these structures need to be inspected and maintained to ensure that water is not washing down long stretches of road or left standing. If muddy water is noticed entering a stream, steps need to be taken to correct the problem.



## IN SIXTY YEARS!

This photograph of the same log cabin was taken in the spring of 1960. It was not possible to photograph the cabin from exactly the same spot as the original because the view is now completely obscured by the forest. Sixty years later, the forest of Redwood State Park is a dense old-growth forest.



## LOGGING IN THE PAST



### OLD GROWTH FOREST



### EARLY LOGGERS



### HORSE SKIDDING TO AND FROM THE MILL

### TRANSPORTING LOGS BY WATER



### "CUT OUT" AREA SHOWING AN INCLINE RAIL TRANSPORT



### PROCESSING AT THE SAWMILL



### SAWN LUMBER AWAITING TRANSPORT BY RAIL

## PRODUCE TIMBER AND PROTECT WATER WITH BEST MANAGEMENT PRACTICES

WITH LOGGING,  
THE POTENTIAL  
PROBLEM IS  
MUD IN THE  
STREAM



THE MUD COMES  
FROM THE  
HAUL ROADS  
AND SKID ROADS  
WHICH ARE  
USED TO REMOVE  
THE TIMBER



Rainfall can easily detach soil particles in areas where the soil has been disturbed. Runoff water moving freely along the ground can transport these particles and detach others.

Many of these soil particles may end up in a stream, causing problems with drinking water, stream dryness, flooding, fishing and stream life.

The amount of soil lost to erosion is proportional to:

Number of roads	Length of road	Steepness of road	Amount of rainfall	Amount of stream
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When taken in nature and disturbed and in erosion, water runoff.

## LOOK WHAT HAPPENS

The photograph below shows a newly constructed road in Redwood State Park in Redwood State, Oregon. It was made by the workers in 1960. A heavy stream flows over the top of the photograph but the stream bed is a dense old-growth forest.







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**ROADS AND OPERATIONS SHOULD BE AWAY FROM STREAMS.** Build landings at least 100 feet from streams. The less soil disturbance near the water, the better. A strip of vegetation, at least 25 feet wide along the stream, should be left as a filter area to slow runoff and to trap loose material.



**ROADS AND LANDINGS SHOULD BE RETIRED WHEN OPERATIONS CEASE.** Water bars, earth barriers, and planting grass are



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Water bars, earth barriers, and planting grass are ways to protect and maintain road beds.

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This photograph of the same log cabin was taken in the spring of 1990. It was not possible to photograph the cabin from exactly the same spot as the original because the view is now completely obscured by the forest. Given sixty years, nature with little or no help from man, has returned the forest of Babcock State Park to a state of lush sylvan beauty.



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**HORSE SKIDDING  
TO AND FROM  
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**TRANSPORTING  
LOGS BY  
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**"CUT OUT" AREA**







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"CUT OUT" AREA  
SHOWING AN  
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SAWN LUMBER AWAITING TRANSPORT  
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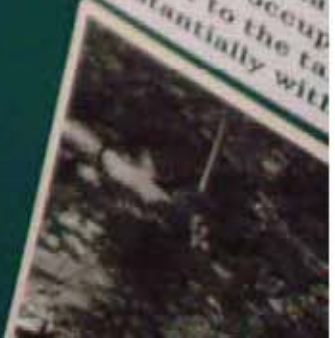
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THE U.S. ENVIRONMENTAL PROTECTION AGENCY, THE WEST VIRGINIA  
DIVISION OF FORESTRY, THE WVU CO-OPERATIVE EXTENSION SER-  
VICE, THE POCAHONTAS COUNTY COMMISSION, AND THE FOREST  
PRODUCTS INDUSTRY IN OUR AREA ALL HELPED TO MAKE THIS  
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The amount of soil lost to waterways is proportional to:

Steepness of road	Intensity of rainfall	Duration
X	X	X

Steps taken to reduce soil disturbance and to control water runoff.

**LOOK WHAT HAPPENS**

The photograph below, shows a newly constructed log cabin in Babcock State Park in Southern West Virginia, was ready for occupancy in 1937 shortly prior to the taking of this area substantially.



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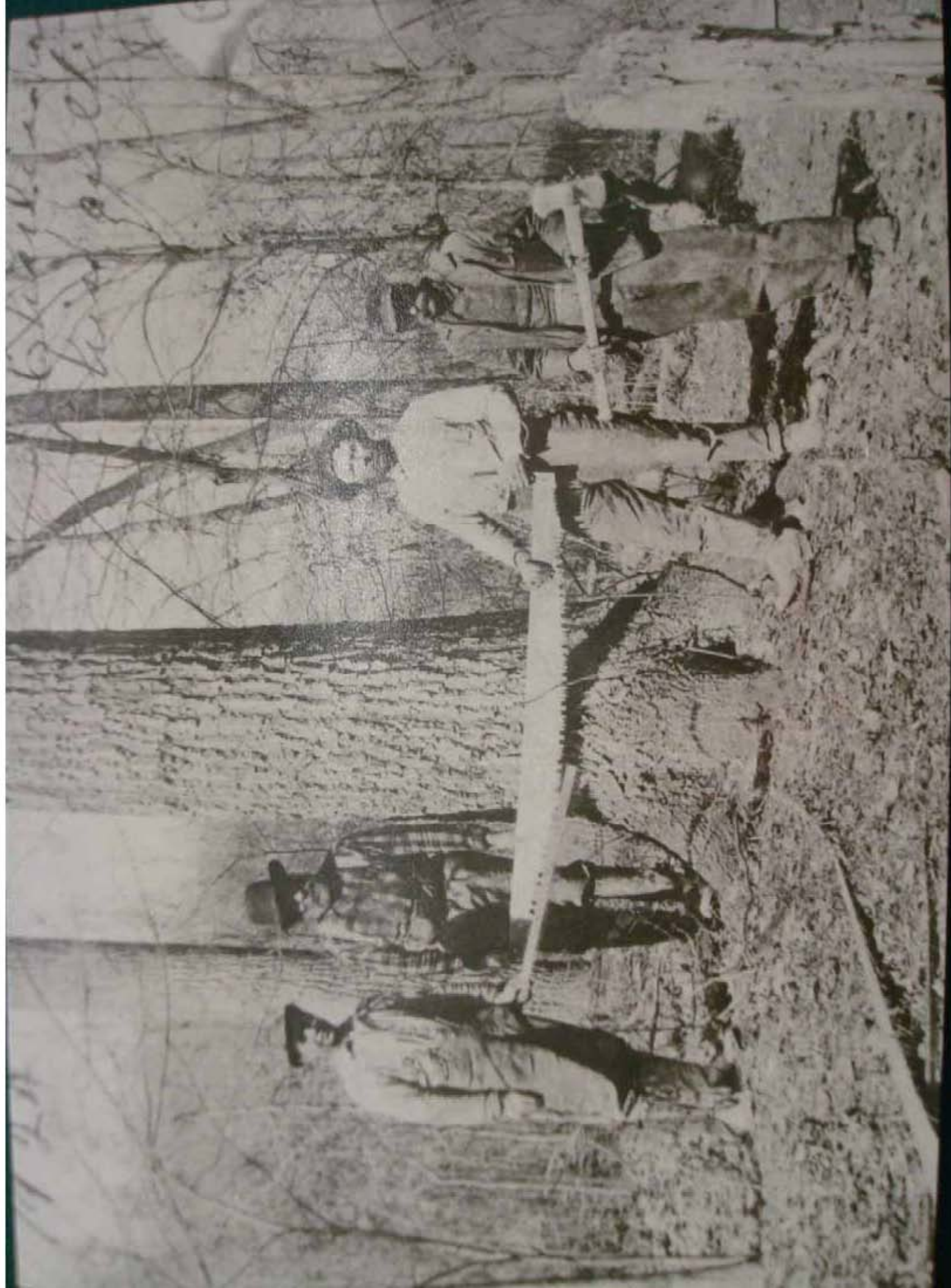
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The photograph below, shows a newly constructed log cabin in Babcock State Park in Southern West Virginia. It was ready for occupancy in 1937. A timber harvest shortly prior to the taking of the photograph had left the area substantially without trees of any great size.









# **OLD GROWTH FOREST**



**EARLY**

**LOGGERS**









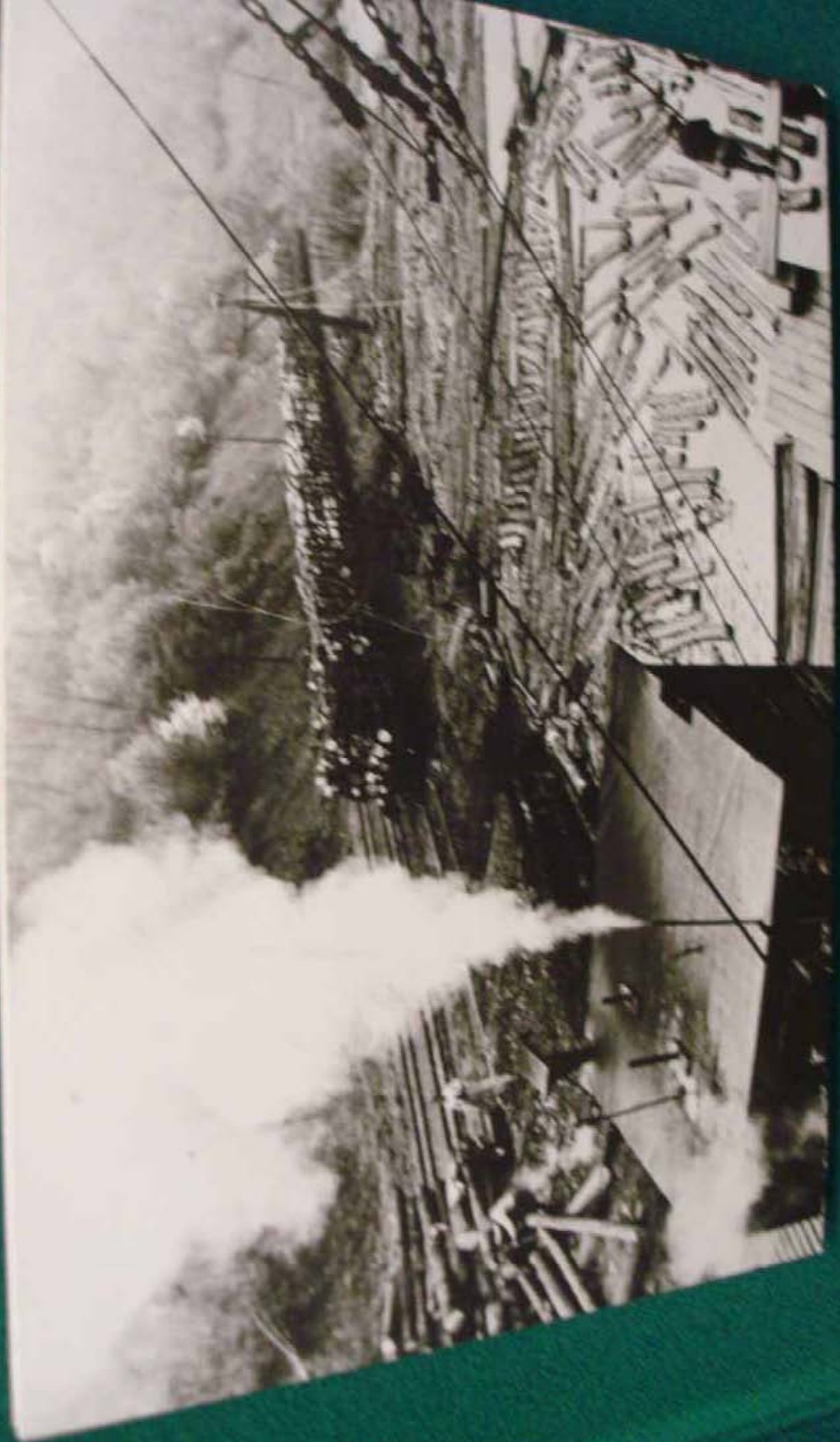






**HORSE SKIDDING  
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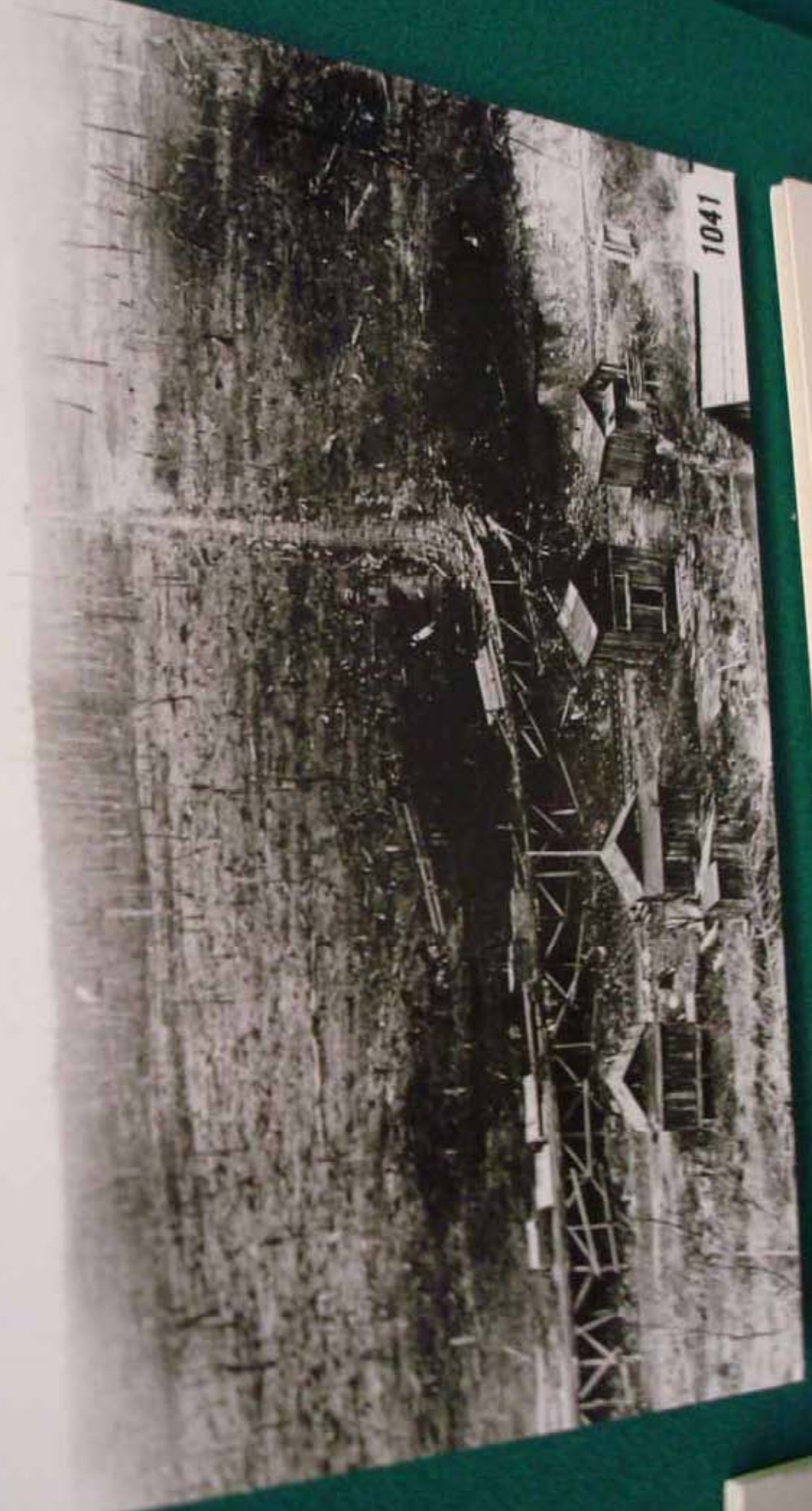




**TRANSPORTING  
LOGS BY  
WATER**







NEW AREA



WATER





**"CUT OUT" AREA**

**SHOWING AN**

**INCLINE RAIL**

**TRANSPORT**





# PROCESSING







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# TRANSPORT



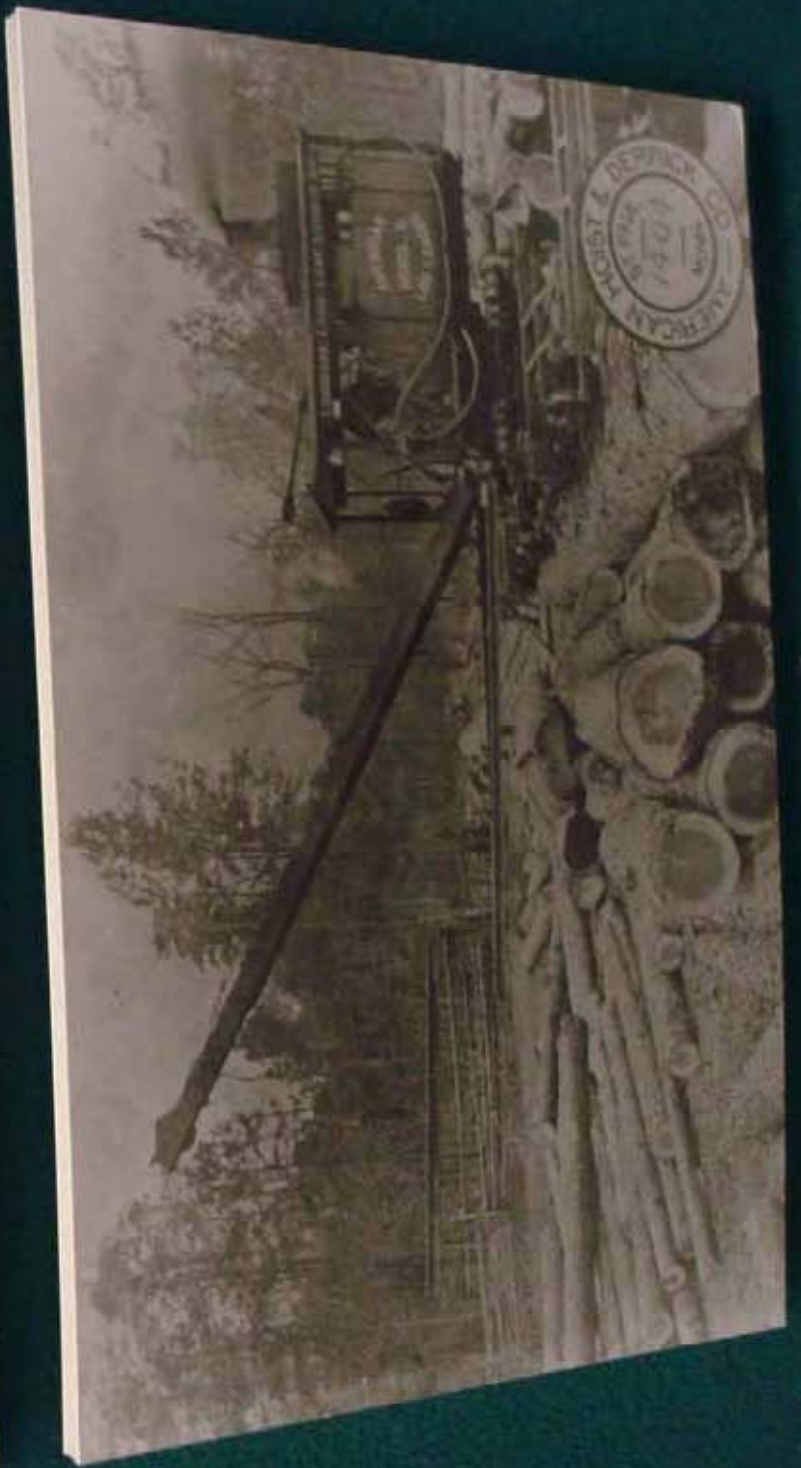
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